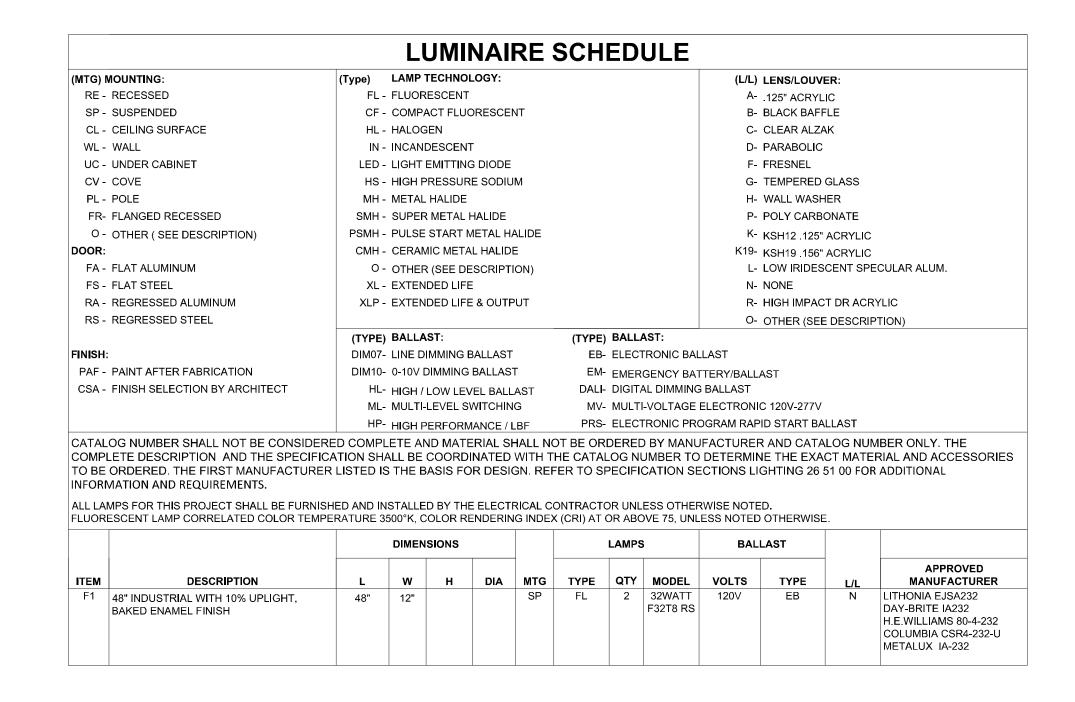
GENERAL ELECTRICAL EQUIPMENT SCHEDULE THE SYMBOLS AND THE EQUIPMENT SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF QUANTITIES AND SHALL FURNISH ALL MATERIAL REQUIRED, WHETHER SPECIFIED OR NOT, TO CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE BUT ARE GIVEN ONLY TO AID THE CONTRACTOR IN THE SEARCH FOR MATERIAL. NO MATERIAL SHALL BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. EACH CONTRACTOR SHALL FIRST READ THE COMPLETE DESCRIPTION OF THE MATERIAL ON THESE DRAWINGS AND SPECIFICATIONS. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN. "STANDARD COLOR" INDICATES FACTORY FINISH AVAILABLE AT NO ADDITIONAL CHARGE. SYMBOL DESCRIPTION BASIS OF DESIGN ALL SWITCH, RECEPTACLE, OUTLET, AND COVERPLATE COLORS SHALL BE VERIFIED WITH VA PROJECT MANAGER, UNLESS INDICATED OTHERWISE. PASS & SEYMOUR COOPER ALL SWITCHES, RECEPTACLES, AND OUTLETS SHALL BE COMPLETE WITH #302
STAINLESS STEEL COVERPLATES IN FINISHED SPACES WHERE WALLS ARE FINISHED; #302 STAINLESS STEEL COVERPLATES IN UNFINISHED SPACES FOR FLUSH BOXES; PASS & SEYMOUR AND GALVANIZED STEEL COVERPLATES IN UNFINISHED SPACES FOR SURFACE MOUNTED BOXES. WHERE SEVERAL DEVICES ARE GANGED TOGETHER, THE COVER PLATE SHALL BE OF THE GANGED STYLE FOR THE NUMBER OF DEVICES USED. INSTALL NAMEPLATE IDENTIFICATION FOR ALL DEVICES. SWITCH, SINGLE POLE, SINGLE THROW, 120/277 VOLT, 20 AMP. TOGGLE HANDLE, MAINTAINED CONTACT, SIDE AND BACK WIRED, HUBBELL HBL1221 LEVITON 1221-2 PASS & SEYMOUR PS20AC1 RECEPTACLE, DUPLEX, HOSPITAL GRADE, 125 VOLT, 20 AMP, 3 WIRE GROUNDING TYPE, N.E.M.A. 5-20R, IMPACT RESISTANT THERMOPLASTIC FACE, ONE PIECE NICKEL-PLATED BRASS BACK STRAP WITH INTEGRAL GROUND CONTACTS. HUBBELL HBL8300 LEVITON 8300 PASS & SEYMOUR 8300 COOPER 8300 OUBLE DUPLEX, CONSIST OF TWO DUPLEX RECEPTACLES, DOUBLE GANG BOX, PLASTER RING AND FACEPLATE. REFER TO SPECIFICATIONS LECTRICAL CONNECTION TO EQUIPMENT AND MOTORS, SIZE PER N.E.C. OORDINATE REQUIREMENTS WITH CONTRACTOR FURNISHING EQUIPMENT OR MOTOR. SPECIFICATIONS AND GENERAL INSTALLATION NOTES FOR TERMINATIONS JUNCTION BOX, SIZE PER N.E.C., REFER TO SPECIFICATIONS FOR GENERAL REFER TO SPECIFICATIONS (1)CONSTRUCTION, USE OF THIS SYMBOL DOES NOT INDICATE ALL JUNCTION BOXES EQUIRED FOR THIS CONTRACT ARE SHOWN. COMPATIBLE WITH EXISTING DIGITAL POWER METER, MOUNTED IN FACE OF EQUIPMENT/DISTRIBUTION PANEL, DIGITAL READOUT OF VOLTS, AMPS, KW, KWH. DEMAND KW, THD NETWORK COMMUNICATIONS CAPABLE. DO NOT INSTALL IN AUXILIARY COMPARTMENT UNLESS SYSTEM THERE IS PHYSICAL SPACE ADJACENT TO THE PANEL FOR THE COMPARTMENT. IF PHYSICAL SPACE DOES NOT EXIST, PROVIDE SEPARATE ENCLOSURE AND MOUNT DISTRIBUTION PANEL, CIRCUIT BREAKER TYPE, 480 VOLT, 3 PHASE, GROUND BUS, SURFACE MOUNTED NEMA 1 ENCLOSURE, SUITABLE FOR USE AS SERVICE ENTRANCE <u>'301–1H'</u> EQUIPMENT, REFER TO ONE LINE DIAGRAM AND SPECIFICATIONS. GENERAL ELECTRIC SIEMENS P4 CUTLER-HAMMER PRL5 DISTRIBUTION PANEL, CIRCUIT BREAKER TYPE, 480/277 VOLT, 3 PHASE, S/N, GROUND BUS, SURFACE MOUNTED NEMA 1 ENCLOSURE, SUITABLE FOR USE AS <u>'1200H'</u> SQUARE D I-LINE GENERAL ELECTRIC SERVICE ENTRANCE EQUIPMENT, REFER TO ONE LINE DIAGRAM AND SPECIFICATIONS. SIEMENS P4 CUTLER-HAMMER PRL5 DISTRIBUTION PANEL, CIRCUIT BREAKER TYPE, 208/120 VOLT, 3 PHASE, S/N,
GROUND BUS, SURFACE MOUNTED NEMA 1 ENCLOSURE, SUITABLE FOR USE AS
SERVICE ENTRANCE EQUIPMENT, REFER TO ONE LINE DIAGRAM AND SPECIFICATIONS.

SIENERAL ELECTRIC CUTLER-HAMMER PRL5 DISTRIBUTION PANEL, CIRCUIT BREAKER TYPE, 208/120 VOLT, 3 PHASE, S/N, GROUND BUS, 500A MCB, SURFACE MOUNTED COLUMN WIDTH NEMA 1 ENCLOSURE, <u>'5BD'</u> GENERAL ELECTRIC REFER TO ONE LINE DIAGRAM AND SPECIFICATIONS. SIEMENS P4 CUTLER-HAMMER PRL5 SQUARE D PANELBOARD, SURFACE MOUNT, 480/277 VOLT, 3 PHASE, 4 WIRE, S/N, GROUND BUS, COPPER BUS, BOLT-ON BREAKERS, NEMA 1 ENCLOSURE, REFER TO SCHEDULES FOR SIZE AND CONFIGURATION, REFER TO ONE LINE DIAGRAM AND GENERAL ELECTRIC AE SPECIFICATIONS FOR ADDITIONAL INFORMATION. CUTLER-HAMMER PRL2 PANELBOARD, SURFACE MOUNT, 208/120 VOLT, 3 PHASE, 4 WIRE, S/N, GROUND BUS, COPPER BUS, BOLT-ON BREAKERS, NEMA 1 ENCLOSURE, REFER TO SCHEDULAR FOR SIZE AND CONFIGURATION, REFER TO SPECIFICATIONS FOR SQUARE D NQ GENERAL ELECTRIC AQ SIEMENS P1 CUTLER-HAMMER PRL1 PANELBOARD, RECESS MOUNT, 208/120 VOLT, 3 PHASE, 4 WIRE, S/N, GROUND BUS, COPPER BUS, BOLT-ON BREAKERS, NEMA 1 ENCLOSURE, REFER TO SQUARE D NQ GENERAL ELECTRIC AQ SIEMENS P1 SCHEDULES FOR SIZE AND CONFIGURATION, REFER TO SPECIFICATIONS FOR CUTLER-HAMMER PLR1



			DISCO	DNNE	CT A	ND S	STAF	RTER SO	CHEDUI	_E			
				REMARKS:									
STARTE	R TYPE:			SA -	STANDAR	D ACCESS	ORIES (IN	CLUDES * ITEMS)					
FV - FULL VOLTAGE					CONTROL			PF - PHASE FAILURE RELAY					
YD - WYE - DELTA					FUSED 12	.0V		(5 HP OR GREATER)					
RE -	REVERSIN	G		*EO - ELECTRONIC OVERLOAD					O - MELTING THERMAL OVERLOADS				
TW -	2 SPEED, 2	2 WINDING		*HA -	HAND-OF	F-AUTO IN	DOOR	TS -	TS - 2 SPEED SELECTOR SWITCH IN DOOR				
	2 SPEED,			*RP -	RED (RUN	I) PILOT LIC	GHT IN	GP -	GP - GREEN (OFF) PILOT LIGHT IN DOOR				
RV - REDUCED VOLTAGE AUTOXFMR					DOOR	,		FA - 4-CONVERTIBLE AUXILIARY CONTACTS					
SS -	SOLID STA	TE		*TA -	TWO CON	IVERTIBLE	FA - 4-CONVERTIBLE AUXILIARY CONTACTS ERTIBLE EI - ELECTRICAL INTERLOCK (2)-N.O.& (2)-N.C CONTACTS SS - START-STOP PUSHBUTTON IN DOOR						
MD - MOTOR DISCONNECT					AUXILIAR'	Y CONTAC	CTS						
MS -	MANUAL S	TARTER		S/N -	INSULATE		\L	HL -	HANDLE PADLO	CK HASP			
MX -	MANUAL S	WITCH			ASSEMBL	Υ.							
FS-	FUSED SW	/ITCH											
	DISCON	INECT TYPE	& RATING			STAI	RTER						
		NON-	CIRCUIT			NEMA		NEMA					
ITEM	FUSED	FUSED	BREAKER	VOLTAGE	POLES	SIZE	TYPE	ENCLOSURE	REMARKS	APPROVED MANUFACTURERS			
<u>FCS-1</u>	30A			480	3	1	FV	1	SA, FUSED AS NOTED	SQUARE D 8538 SCG34 CUTLER-HAMMER TYPE ECN GENERAL ELECTRIC CR308 SIEMENS CLASS 17			
CB-601 CB-701			100A	480	3			1 SURFACE MOUNT		SQUARE D 650 FAL340100 610 FA100S CUTLER-HAMMER GENERAL ELECTRIC SIEMENS			

				TRA	AN:	SFOF	RMI	ER S	SCH	1E[DULE		
TYPE:				REMARKS:									
TP1 - NEMA TP 1 DRY TYPE				AUT - AUTOTRANSFORMER						AL - ALUMINUM WINDINGS			
K4 - K4 RATED TP 1 DRY TYPE				BB - BUCK-BOOST						CP - COPPER WINDINGS			
K13 - K13 RATED TP 1 DRY TYPE				LIQ - LIQUID FILLED					RS - EPOXY RESIN ENCAPSULATED				
PE -	NEMA PRE	MIUM EFF	FICIENCY							FL - FILTERED			
HM -	HARMONIC	MITIGAT	ING TP 1							NV - NON-VENTILATED			
									NL - 200% RATED NEUTRAL				
									EL - ELECTROSTATIC SHIELD				
NCLOSUF	RE: NEMA 1	UNLESS S	SPECIFIED C	THERWISE									
	KVA		MAX. TEMP.	PRIMARY		SECONDARY		TAPS					
ITEM	RATING	TYPE	RISE C.	VOLTS	PH	VOLTS	PH	% REG	#(+)	#(-)	REMARKS	APPROVED MANUFACTURERS	
TR-225	225	TP1	150	480	3	208Y/ 120	3	2.5	2	4	AL	SQUARE D 7400 EE225T3H CUTLER-HAMMER TYPE DT-3 GENERAL ELECTRIC TYPE QL	

ELECTRICAL DEMOLITION NOTES:

- THE ELECTRICAL DRAWINGS INDICATE EXISTING ELECTRICAL ITEMS TO BE REMOVED. THE DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED AND DO NOT INDICATE EVERY BOX, CONDUIT, OR WIRE THAT MUST BE REMOVED. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID AND VERIFY EXISTING CONDITIONS.
- ELECTRICAL ITEMS (i.e., LIGHTING FIXTURES, RECEPTACLES, SWITCHES, ETC.) REMOVED AND NOT RELOCATED REMAIN THE PROPERTY OF THE VA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MATERIAL THE VA DOES NOT WANT TO REUSE OR RETAIN (i.e., FOR MAINTENANCE PURPOSES).
- 3. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE VA BEFORE TURNING OFF POWER TO CIRCUITS, FEEDERS, PANELS, ETC. COORDINATE ALL OUTAGES WITH THE VA. CONDUIT CONCEALED IN WALL CONSTRUCTION MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.
- 4. EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATED EXISTING CONDUIT SHALL NOT BE ALLOWED. BONDING CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO ASSURE PROPER GROUND PATH.
- 5. EQUIPMENT REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND
- CONTRACTOR SHALL REMOVE AND INSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR. NO MORE THAN 10 CEILING TILES OUT AT A TIME WHEN CONTRACTOR IS WORKING IN THE AREA. ALL CEILING TILES MUST BE IN PLACE AT THE END OF THE WORK DAY OR WHEN THE CONTRACTOR LEAVES THE AREA.

CONDUIT AND WIRING AS REQUIRED TO MAINTAIN POWER TO REMAINING EQUIPMENT.

GENERAL ELECTRICAL NOTES:

- 1. "1/300" INDICATES DETAIL NUMBER/SHEET NUMBER.
- 2. ##-### INDICATES ELECTRICAL EQUIPMENT DEFINED IN ELECTRICAL SCHEDULES. REFER TO DRAWINGS CONTAINING ELECTRICAL SCHEDULES. PERMANENT NAMEPLATE SHALL MATCH FINAL EQUIPMENT NOMENCLATURE, NOT ELECTRICAL EQUIPMENT TAG NAME, REFER TO SPECIFICATIONS.
- INDICATES KEYED NOTE USED TO DESCRIBE ADDITIONAL INFORMATION OF WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL IT IS SHOWN WITH.
- ALL ELECTRICAL CONDUCTORS SHALL BE COPPER.
 - ELECTRICAL CONTRACTOR
 GENERAL CONTRACTOR ABOVE FINISHED FLOOR
- MOUNTING HEIGHT FROM FINISHED FLOOR TO CENTERLINE
- LINE TYPE KEY:
- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE) ---- NEW WORK UNDERFLOOR OR UNDERGROUND BY THIS CONTRACTOR (DARK LONG DASHED LINE)
- NEW WORK BY OTHERS AND/OR EXISTING TO REMAIN (LIGHT SOLID LINE)
- ----- EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK SHORT DASHED LINE)

ONE LINE DIAGRAM NOTES:

- SCCR AND AIC RATINGS LISTED FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS "SERIES RATED"
- 2 ALL FUSES FROM 0 AMPERE TO 200 AMPERE SHALL BE DUAL ELEMENT, CLASS RK-5 UNLESS NOTED OTHERWISE.
- / INDICATES DIRECT CONNECTION OF GROUND CONDUCTOR TO GROUND BUS.
- INDICATES O.Z. GEDNEY OR EQUAL GROUND BUSHING BONDED TO GROUND BUS WITH CONDUCTOR SIZED TO MAXIMUM FEEDER
- GROUND CAPACITY. 5 • OF INDICATES OVERLOADS SIZED PER MOTOR NAMEPLATE FULL LOAD
- 6 INDICATES STARTER NEMA SIZE.
- 7 CONDUCTORS ARE SIZED BASED ON NEC TABLE 310.16, FOR THE LISTED QUANTITY OF COPPER CONDUCTORS, IN RACEWAY. CONDUCTOR AMPACITIES ARE BASED ON 60°C AND 75°C TEMPERATURE RATINGS,
- 8 ALL WIRE SHALL BE TYPE "THHN" ABOVE GRADE. FEEDERS LOCATED BELOW FLOOR SLAB OR UNDERGROUND SHALL BE TYPE "THWN".
- CONDUCTOR AND CONDUIT SIZES ON THE LINE AND LOAD SIDES OF ALL NON-FUSIBLE DISCONNECT SWITCHES SHALL BE IDENTICAL UNLESS NOTED
- ├─ INDICATES CURRENT TRANSFORMER, SIZE AS SPECIFIED.

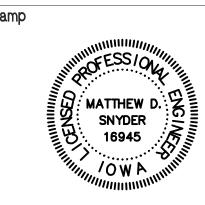
ELECTRICAL INSTALLATION NOTES:

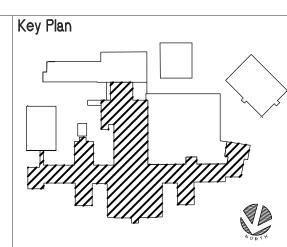
- 1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADAAG (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES).
- . COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL
- AS EVENLY AS POSSIBLE BETWEEN EACH PHASE. 3. A #12 GREEN INSULATED GROUND CONDUCTOR SHALL BE INSTALLED WITH CIRCUIT CONDUCTORS TO ALL RECEPTACLES.
- 4. CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILING, AND IN FLOOR SLAB, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT IN MECHANICAL ROOMS, AND STORAGE ROOMS WITHOUT CEILINGS MAY BE EXPOSED ON BUILDING STRUCTURE.
- 5. FLUSH MOUNT ALL TOGGLE SWITCHES AT +42" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT
- WHERE OTHERWISE NOTED. TOGGLE SWITCHES MAY BE SURFACE MOUNTED WHEN CONDUIT IS
- 6. FLUSH MOUNT ALL DUPLEX RECEPTACLES AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED.

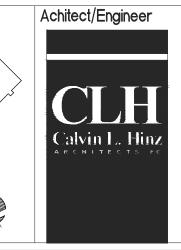
7. ELECTRICAL EQUIPMENT SHALL BE MOUNTED TO AVOID IMPEDANCE OF OPERATION OF AND/OR

- ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF ELECTRICAL, ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR, SHALL BE APPROVED IN ADVANCE BY THE
- 8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
- 9. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. COORDINATE ALL REQUIRED FIRESTOPS WITH VA PROJECT
- 10. ALL WELDING SHALL BE ACCORDING TO AMERICAN WELDING SOCIETY STANDARDS. CONTRACTOR
- SHALL FURNISH TO THE PROJECT MANAGER CERTIFICATES QUALIFYING EACH WELDER, PRIOR TO START OF WORK. THE PROJECT MANAGER RESERVES THE RIGHT TO REQUIRE QUALIFYING DEMONSTRATION, AT THE CONTRACTOR'S EXPENSE, OF ANY WELDERS ASSIGNED TO THE JOB.
- 11. CONTRACTOR SHALL REMOVE AND REINSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR. NO MORE THAN 10 CEILING TILES OUT AT A TIME WHEN CONTRACTOR IS WORKING IN THE AREA. ALL CEILING TILES MUST BE IN PLACE AT THE END OF THE WORK DAY OR WHEN THE CONTRACTOR LEAVES THE AREA.

Approved Supervisor Facility Manager Approved Associate Director Patient Care Approved Associate Director Approved Chief of Staff **Approved Director** Date







Calvin L. HINZ Architects, P.C. CLH 2010-18 3705 North 200th & eet Omaha, Nebraska68022 Phone: 402.291.6941 Fax: 402.291.9193



STRUCTURAL : MECHANICAL : ELECTRICAL

TECHNOLOGY: MEDICAL EQUIPMENT SOLUTIONS

Drawing Title ELECTRICAL NOTES AND SCHEDULES

Approved: Project Director

Project Title ELECTRICAL PANELS, FEEDERS, SWITCH UPGRADES Location

Checked

LEEVAN MATSNY

IOWA CITY, IOWA

Project Number 636A8-12-009 **Building Number**

Drawing Number

Dwg. 9 of 11

Office of **Facilities** Management

Department of Veterans Affairs

VA FORM 08-6231

8 19